Hydrometeorology Testbed (HMT)

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Abstract

NOAA's Hydrometeorology Testbed (HMT; hmt.noaa.gov and www.hpc.ncep.noaa.gov/hmt/) conducts research on precipitation and weather conditions that can lead to flooding, and fosters transition of scientific advances and new tools into forecasting operations. At the newly named NWS Weather Prediction Center (WPC), HMT accelerates the assessment and implementation of new technology, research results, and other scientific advancements from the research and development communities to enhance WPC products and services. This talk will summarize current (over the past year) and ongoing HMT activities and provide an outlook for future HMT activities.

HMT-West Legacy: A comprehensive observing and numerical modeling project in coordination with the California Department of Water Resources.

HMT-Northwest: Sustained operations of a coastal Atmospheric River Observatory in Washington.

ARFEX: An Atmospheric River Retrospective Forecasting Experiment designed to assemble researchers and operational forecasters in order to identify and evaluate potential techniques to improve forecasts of atmospheric river (AR) induced extreme precipitation events along the U.S. West Coast.

2012 Winter Weather Experiment: A project to explore the challenges of probabilistic winter weather forecasting. The experiment focused on the use of ensemble systems to help quantify and communicate uncertainty in winter weather forecasts.

CalWater: A three-year field project built upon HMT to study the impacts of aerosols on precipitation and the inland penetration of atmospheric rivers in California.

Sonoma County Water Agency: A two-year project to improve quantitative precipitation information and frost forecasts for water resource management.

HMT-Southeast Pilot Study (HMT-SEPS): A joint NASA/NOAA project focused on quantitative precipitation estimation and forecasting. NASA's interests are in satellite calibration and validation for the new Global Precipitation Measurement mission.